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LETTERS TO THE EDITOR

Hemodynamic Profiles in Heart Failure Patients

I read with great interest the study by Nohria et al. (1) regarding clinical assessment for estimation of hemodynamic profiles in heart failure patients. I compliment the investigators for coming up with a practical index that can be easily applied by clinicians with even modest experience in heart failure. Those of us in clinical practice make similar qualitative assessments daily. Having available a standardized instrument would be very useful when approaching diagnosis and treatment of heart failure patients.

I note that their "profile L" ("dry-cold" patients) represented a limited number of subjects and was not able to be analyzed statistically. The researchers suggest that these patients have "significantly reduced cardiac reserve with a decreased tendency toward congestion" or that this group might include "patients with severely dilated ventricles and anatomic mitral regurgitation who developed symptoms with minimal exertion." I wonder if they have any hemodynamic or Doppler echocardiographic data to support these assertions. Perhaps some of these patients actually had a low cardiac output state due to intravascular depletion, with subsequent reduction in contractile force via Starling mechanisms.

Also, given the wealth of literature showing the prognostic usefulness of diastolic filling patterns on Doppler echocardiography in patients with heart failure (2), I wonder whether these parameters were assessed. Further, does the clinical index advanced by the investigators correlate with Doppler patterns of diastolic filling and does it provide additional prognostic value?

I believe the proposed classification would be very useful clinically when more widely validated and correlated with existing clinical tools.

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2. Whalley GA, Doughty RN, Gamble GD, et al. Pseudonormal mitral filling pattern predicts hospital re-admission in patients with congestive heart failure. J Am Coll Cardiol 2002;39:1787–95.

REPLY

We appreciate Dr. Pressman's interest in our study regarding the bedside evaluation of hemodynamic profiles in patients hospitalized with a new or prior diagnosis of heart failure (1). Hemodynamic data are available for only 3 of 16 patients at the time of "profile L" (cold-dry) assessment, and we are therefore unable to confirm how often these patients have a low cardiac index without elevated filling pressures. The routine resting echocardiographic data in these patients demonstrate dilated left ventricles (mean LVEDD 6.2 ± 0.75 cm) with only mild-moderate mitral regurgitation. Dr. Pressman's speculation that profile L might represent some patients with a low cardiac output due to intravascular depletion provides a possible additional explanation for this profile.

However, it has been consistently shown that stroke volume is maintained at near normal filling pressures in dilated heart failure (2). The ongoing National Institutes of Health (NIH)-sponsored Evaluation Study of Congestive Heart failure and Pulmonary Artery Catheterization Effectiveness trial (ESCAPE) (3) will shed further light on the correlation between hemodynamic parameters and the clinical profiles proposed in our study.

As stated by Dr. Pressman, mitral inflow patterns on Doppler echocardiography have been shown to correlate with left-sided filling pressures (4) and to predict outcomes in patients with heart failure (5). We did not routinely assess echocardiographic mitral filling patterns at the time of admission. Therefore, we cannot comment on how our clinical classification system correlates with Doppler patterns of diastolic filling or whether clinical profiles provide additional prognostic value. Doubtless, many diagnostic parameters could be obtained to add to our clinical profiles. The intent of our investigation was to validate a simple bedside assessment to help classify patients at the time of presentation and to guide the selection of initial therapies.

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